



# **California Board of Registered Nursing**

## **2006-2007 Annual School Report**

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### **Data Summary and Historical Trend Analysis**

A Presentation of  
Pre-Licensure Nursing Education Programs in California

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## **PREFACE**

### **Nursing Education Survey Background**

Development of the 2006-2007 Board of Registered Nursing (BRN) School Survey was the work of the Board's Education Advisory Committee (EAC), which consists of directors of nursing education programs, the California Community College Chancellor's Office, the California State University Chancellor's Office and the California Institute of Nursing and Health Care. A list of the EAC members is included in the Appendices. The University of California, San Francisco was commissioned by the BRN to develop the online survey instrument, administer the survey, and report data collected from the survey.

Funding for this project was provided by the California Board of Registered Nursing.

### **Organization of Report**

The survey collects data about nursing programs and their students and faculty from August 1 through July 31. Annual data presented in this report represent August 1, 2006 through July 31, 2007. Demographic information and census data were requested for October 15, 2007.

Data from pre- and post-licensure nursing education programs are presented in separate reports and will be available on the BRN website. Data are presented in aggregate form and describe overall trends in the areas and over the times specified and, therefore, may not be applicable to individual nursing education programs.

Statistics for enrollments and completions represent two separate student populations. Therefore, it is not possible to directly compare enrollment and completion data.

### **Availability of Data**

The BRN Annual School Survey was designed to meet the data needs of the BRN as well as other interested organizations and agencies. A database with aggregate data derived from the 2000-2001 through 2006-2007 BRN School Surveys will be available for public access on the BRN website. Parties interested in accessing data not available on the website should contact the BRN.

The BRN acknowledges that survey respondents may not have had ready access to some of the data that were being requested. To address this issue, a member of the EAC developed a computer program for tracking most of the required data. The computer tracking program was distributed to nursing programs in the fall of 2006. Nursing programs that do not have this program may contact the BRN.

## Value of the Survey

This survey has been developed to support nursing, nursing education and workforce planning in California. The Board of Registered Nursing believes that the results of this survey will provide data-driven evidence to influence policy at the local, state, federal and institutional levels.

The BRN extends appreciation to the Education Advisory Committee and all survey respondents. Your participation has been vital to the success of this project.

## Survey Participation

All California nursing education programs were invited to participate in the survey. All pre-licensure programs that admitted students in 2006-2007 responded to the survey. A list of nursing programs that responded to the survey is provided in the Appendix.

Program Type	# Programs Responded	Total # Programs	Response Rate
ADN	74	74	100.0%
LVN to ADN	8	8	100.0%
BSN	32	32	100.0%
ELM	16	16	100.0%
Sum of Pre-Licensure Programs*	130	130	100.0%

\*Since some nursing schools admit students in more than one program, the number of nursing programs is greater than the number of nursing schools in the state.

## DATA SUMMARY AND HISTORICAL TREND ANALYSES

This analysis presents pre-licensure program data from the 2006-2007 BRN School Survey in comparison with data from previous years of the survey. Data items addressed include the number of nursing programs, enrollments, completions, retention rates, student and faculty census data, and the use of clinical simulation by nursing programs.

### Trends in Pre-Licensure Nursing Programs

#### *Number of Nursing Programs*

From 2005-2006 to 2006-2007, there was an 11.1% (n=13) increase in the number of California nursing programs that lead to RN licensure. Of the thirteen new programs, five are ADN programs, six are BSN programs, and two are ELM programs. The majority (80.8%) of all pre-licensure nursing programs are public.

#### Number of Nursing Programs

	Academic Year						
	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
<b>Total # Nursing Programs</b>	<b>97</b>	<b>100</b>	<b>101</b>	<b>104</b>	<b>109</b>	<b>117</b>	<b>130</b>
<i>AD Programs</i>	71	72	73	73	76	77	82
<i>BSN Programs</i>	22	23	23	23	24	26	32
<i>ELM Programs</i>	4	5	5	8	9	14	16
<i>Public Programs</i>	83	85	86	87	90	96	105
<i>Private Programs</i>	14	15	15	17	19	21	25

#### *Admission Spaces and New Student Enrollments*

Admission spaces available for new student enrollments increased by 9.0% (n=952), from 10,523 spaces in 2005-2006 to 11,475 in 2006-2007. These spaces were filled with a total of 12,709 students, increasing new student enrollment by 14.2% (n=1,578) from 2005-2006.

#### Availability and Utilization of Admission Spaces

	Academic Year						
	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Spaces Available	6,610	6,719	7,601	7,797	9,026	10,523	11,475
New Student Enrollments	6,128	6,422	7,457	7,825	8,926	11,131	12,709
% Spaces Filled	92.7%	95.6%	98.1%	100.4%	98.9%	105.8%	110.8%

Despite the increase in available admission spaces, nursing programs receive more applications requesting entrance into their programs than can be accommodated. In 2006-2007, 55.4%

(n=15,797) of qualified applications to California nursing education programs were not accepted for admission.

### Student Admission Applications

	<i>Academic Year</i>						
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>
<b>Qualified Applications</b>	<b>10,021</b>	<b>10,362</b>	<b>13,926</b>	<b>17,887</b>	<b>20,405</b>	<b>28,410</b>	<b>28,506</b>
<i>AD</i>	6,924	7,554	9,531	12,585	14,615	19,724	19,559
<i>BSN</i>	2,635	2,413	3,301	3,964	4,914	7,391	7,004
<i>ELM</i>	462	395	1,094	1,338	876	1,295	1,943

\*Since these data represent applications rather than individuals, the increase in qualified applications may not represent an equal growth in the number of individuals applying to nursing school.

Although enrollments in all types of pre-licensure nursing education programs have increased since 2000-2001, the majority of California nursing students continue to be educated in public ADN programs.

### New Student Enrollment by Program Type

	<i>Academic Year</i>						
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>
<b>New Student Enrollment</b>	<b>6,128</b>	<b>6,422</b>	<b>7,457</b>	<b>7,825</b>	<b>8,926</b>	<b>11,131</b>	<b>12,709</b>
<i>ADN</i>	4,236	4,558	5,316	5,547	6,160	7,778	8,899
<i>BSN</i>	1,732	1,677	1,903	1,960	2,371	2,709	3,110
<i>ELM</i>	160	187	238	318	395	644	700
<i>Private</i>	951	884	980	1,150	1,614	2,024	2,384
<i>Public</i>	5,177	5,538	6,477	6,675	7,312	9,107	10,325

### Student Completions

The number of students who completed a nursing program in California increased by 10.5% (n=789), from 7,528 in 2005-2006 to 8,317 in 2006-2007. The percentage of student completions by program type is 70.8% ADN, 24.9% BSN and 4.3% ELM.

### Student Completions

	<i>Academic Year</i>						
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>
<b>Student Completions</b>	<b>5,178</b>	<b>5,346</b>	<b>5,623</b>	<b>6,158</b>	<b>6,677</b>	<b>7,528</b>	<b>8,317</b>
<i>AD</i>	3,799	3,826	4,027	4,488	4,769	5,351	5,885
<i>BSN</i>	1,277	1,394	1,412	1,479	1,664	1,861	2,074
<i>ELM</i>	102	126	184	191	244	316	358

### Retention and Attrition Rates

Of the 8,852 students scheduled to complete a nursing program in the 2006-2007 academic year, 72.7% (n=6,437) completed the program on-time, 11.3% (n=996) are still enrolled in the program, and 16.0% (n=1,419) dropped out or were disqualified from the program. The retention rate for 2006-2007 was about the same as it was in the previous academic year.

#### Student Cohort Completion and Retention Data

	Academic Year						
	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
<b>Enrollment</b>	<b>8,478</b>	<b>6,806</b>	<b>8,208</b>	<b>8,151</b>	<b>8,507</b>	<b>8,208</b>	<b>8,852</b>
Completed On Time	5,610	4,553	5,621	5,831	6,055	6,047	6,437
Still Enrolled	1,372	1,184	1,314	1,082	710	849	996
Attrition	1,496	1,069	1,273	1,238	1,742	1,312	1,419
<b>Retention Rate*</b>	66.2%	66.9%	68.5%	71.5%	71.2%	73.7%	72.7%
<b>Attrition Rate</b>	17.6%	15.7%	15.5%	15.2%	20.5%	16.0%	16.0%
<b>% Still Enrolled</b>	16.2%	17.4%	16.0%	13.3%	8.3%	10.3%	11.3%

\*Retention rate = (students who completed the program on-time) / (enrollment)

Comparing attrition rates from 2006-2007 with those from the previous year, ADN program rates remained relatively constant, BSN program rates dropped slightly and ELM program rates illustrated a small increase. Trends in attrition by program type show that ELM programs have lower attrition rates than ADN and BSN programs. Private programs showed a large drop in attrition, from 14.6% in 2005-2006 to 7.9% in 2006-2007, while public programs had a small increase in attrition during the same time period.

#### Attrition Rates by Program Type

Program Type	Academic Year						
	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
ADN	21.5%	16.9%	19.1%	17.0%	23.7%	18.3%	19.0%
BSN	9.0%	14.0%	8.1%	10.8%	11.0%	10.5%	8.7%
ELM	3.3%	1.2%	3.2%	4.7%	14.3%	5.0%	7.2%
Private	11.7%	12.0%	9.6%	10.1%	15.9%	14.6%	7.9%
Public	18.8%	16.5%	16.7%	15.9%	21.2%	16.2%	17.7%

There has been fluctuation in the retention and attrition rates over the six-year period documented in the above tables. There were changes to the survey between 2003-2004 and 2004-2005, and between 2004-2005 and 2005-2006 that may have affected the comparability of these data over time.

### Student Census Data

The total number of students enrolled in California nursing programs increased by 10.8% (n=2,197), from 20,327 on October 15, 2006, to 22,524 a year later. Of these students, 63.0%

(n=14,191) were in ADN programs, 31.4% (n=7,059) in BSN programs, and 5.7% (n=1,274) in ELM programs.

The reported number of pre-nursing students declined from 20,980 in 2006 to 16,023 in 2007. This decrease may be due to fewer programs reporting data than to an actual decrease in the number of pre-nursing students. In 2006, only 35 nursing programs reported the total number of pre-nursing students. Only 26 programs reported these data in 2007.

### Student Census Data

Program	Academic Year						
	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
ADN Program	8,236	8,999	9,547	9,939	11,117	12,632	14,179
BSN Program	4,235	4,254	5,279	5,669	6,285	6,799	7,059
ELM Program	190	148	368	804	659	896	1,274
<b>Total Nursing Students</b>	<b>12,661</b>	<b>13,401</b>	<b>15,194</b>	<b>16,412</b>	<b>18,061</b>	<b>20,327</b>	<b>22,524</b>
Pre-Nursing Students					28,478	20,980	16,023

\*Blank cells indicated that the applicable information was not requested in the given year.

\*\*Changes in the survey may have accounted for the fluctuation in the number of pre-nursing students reported.

### Clinical Simulation in Nursing Education

In 2006-2007, the BRN began collecting data on the use of clinical simulation in nursing schools. Data show that 63.2% (n=74) of nursing schools used a clinical simulation center<sup>1</sup> or enhanced skills lab<sup>2</sup> between 8/1/06 and 7/31/07. The majority of schools that use clinical simulation centers or enhanced skills labs reported that they use these facilities to check clinical competencies and to provide clinical experience not available in a clinical setting. Of the schools that use clinical simulation centers, 75.0% (n=27) plan to expand the center.

Use a Clinical Simulation Center or Enhanced Skills Lab, 2006-2007*	# schools
To check clinical competencies	58
To provide clinical experience not available in a clinical setting	47
To make up for clinical experiences	37
To increase capacity in your nursing program	11

\*These data were collected for the first time in 2006-2007. Therefore, data from previous years of the survey are not available.

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<sup>1</sup> Clinical Simulation Center/Experience - students have a simulated real-time nursing care experience using hi-fidelity mannequins and clinical scenarios, which allows them to integrate, apply, and refine specific skills and abilities that are based on theoretical concepts and scientific knowledge. The experience includes videotaping, de-briefing and dialogue as part of the learning process.

<sup>2</sup> Enhanced Skills Lab - a learning environment that uses hi-fidelity mannequins but is not a fully integrated Clinical Simulation Center.

### *Faculty Census Data*

The total number of nursing faculty increased by 19.7% (n=537) over the last year. On October 15, 2007, there were 3,260 total nursing faculty. Of the full- and part-time faculty reported, 41.9% (n=1,361) were full-time and 58.1% (n=1,888) were part-time.\*

Although there was an increase in the total number of nursing faculty in 2007, that increase has not kept pace with the need for faculty. On October 15, 2007, there were 205 vacant faculty positions. These vacancies represent a 5.9% faculty vacancy rate, which is consistent with faculty vacancy rates reported in the previous two years.

#### **Faculty Census Data**

	<i>Academic Year</i>						
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005*<sup>1</sup></i>	<i>2005-2006*</i>	<i>2006-2007*</i>
<b>Total Faculty</b>	<b>1,840</b>	<b>1,957</b>	<b>2,031</b>	<b>2,207</b>	<b>2,432</b>	<b>2,723</b>	<b>3,260</b>
<i>Full-time</i>	1,047	1,090	1,087	1,061	930	1,102	1,361
<i>Part-time</i>	793	867	944	1,146	959	1,619	1,888
<b>Vacancy Rate**</b>		<b>4.1%</b>	<b>5.9%</b>	<b>3.7%</b>	<b>6.0%</b>	<b>6.6%</b>	<b>5.9%</b>
<i>Vacancies</i>		83	128	84	154	193	205

\*In 2004-2005, 2005-2006 and 2006-2007, the sum of full- and part-time faculty did not equal the total faculty reported.

\*\*Vacancy rate = number of vacancies/(total faculty + number of vacancies)

1 - Faculty vacancies were estimated based on the vacant FTEs reported.

### *Summary*

In the past seven years, the number of California pre-licensure nursing programs has grown by 33, to 130 programs in 2006-2007. The number of admission spaces during this time period has increased by 73.6%, to 11,475. Although admission spaces to nursing programs continue to increase, they have not kept pace with the number of qualified applications to those programs.

Nursing program expansions have led to a growing number of RN graduates. Between 2000-2001 and 2006-2007, graduations increased 60.6% (n=3,139). Graduations will continue to rise as larger cohorts of students complete RN programs. There was an increase in nursing program retention rates from 66.2% in 2000-2001 to 71.5% in 2003-2004. Since 2003-2004, retention rates have remained around 72%.

Expansion in RN education has required nursing programs to hire more faculty to teach the growing number of students. Although the number of nursing faculty has grown by 77.2% since 2000-2001, faculty hires have not kept pace with the growth in California pre-licensure programs. In 2006-2007, 205 faculty vacancies were reported, representing a faculty vacancy rate of 5.9%. Without more faculty, RN programs will not be able to continue their expansion.



## APPENDICES

### APPENDIX A – List of Survey Respondents by Degree Program

#### *ADN Programs (74)*

American River College	Los Angeles Trade-Tech College
Antelope Valley College	Los Angeles Valley College
Bakersfield College	Los Medanos College
Butte Community College	Maric College
Cabrillo College	Mendocino College
Cerritos College	Merced College
Chabot College	Merritt College
Chaffey College	Modesto Junior College
* Citrus College	Monterey Peninsula College
City College of San Francisco	Moorpark College
College of Marin	Mount Saint Mary's College
College of San Mateo	Mount San Antonio College
College of the Canyons	Mount San Jacinto College
College of the Desert	Napa Valley College
College of the Redwoods	National University
College of the Sequoias	Ohlone College
Contra Costa College	Pacific Union College
Copper Mountain Community College	Palomar College
Cuesta College	Pasadena City College
Cypress College	Rio Hondo College
De Anza College	Riverside Community College
East Los Angeles College	Sacramento City College
El Camino College - Compton Education Center	Saddleback College
El Camino College	San Bernardino Valley College
Evergreen Valley College	San Diego City College
Fresno City College	San Joaquin Delta College
Glendale Community College	Santa Ana College
Golden West College	Santa Barbara City College
Grossmont College	Santa Monica College
Hartnell College	Santa Rosa Junior College
Imperial Valley College	Shasta College
Long Beach City College	Sierra College
Los Angeles County College of Nursing & Allied Health	Solano Community College
Los Angeles City College	Southwestern College
Los Angeles Harbor College	Ventura College
Los Angeles Pierce College	Victor Valley College
Los Angeles Southwest College	Yuba College

\* - New programs in 2006-2007

*LVN to ADN Programs (8)*

Allan Hancock College  
\* College of the Siskiyous  
Gavilan College  
\* Mira Costa College

\* San Joaquin Valley College  
\* Unitek College  
West Coast University – Los Angeles  
Western Career College

*BSN Programs (32)*

\* American University of Health Sciences  
Azusa Pacific University  
Biola University  
California Baptist University  
CSU Bakersfield  
\* CSU Channel Islands  
CSU Chico  
CSU East Bay  
CSU Fresno  
\* CSU Fullerton  
CSU Long Beach  
CSU Los Angeles  
\* CSU Northridge  
CSU Sacramento  
CSU San Bernardino  
CSU San Marcos

CSU Stanislaus  
Dominican University of California  
Humboldt State University  
Loma Linda University  
Mount Saint Mary's College  
National University  
Point Loma Nazarene University  
Samuel Merritt College  
San Diego State University  
San Francisco State University  
San Jose State University  
Sonoma State University  
\* University of California Irvine  
University of California Los Angeles  
\* University of Phoenix - Northern California  
University of San Francisco

*ELM Programs (16)*

Azusa Pacific University  
CSU Bakersfield  
\* CSU Dominguez Hills  
CSU Fresno  
\* CSU Fullerton  
CSU Long Beach  
CSU Los Angeles  
CSU Sacramento

Samuel Merritt College  
San Francisco State University  
Sonoma State University  
University of California Los Angeles  
University of California San Francisco  
University of San Diego  
University of San Francisco  
Western University of Health Sciences

\* - New programs in 2006-2007

## **APPENDIX B – BRN Education Advisory Committee Members**

### **BRN Education Advisory Committee Members**

#### **Members**

Sherry Fox, Chair	California State University, Chico
Sue Albert	College of the Canyons
Jim Comins	California Community College Chancellor's Office
Margaret Craig	Napa Valley College
Allison Jones	California State University Chancellor's Office
Deloras Jones	California Institute of Nursing and Health Care
Diane Welch	Retired ADN Program Director
Barbara Whitney	California Community College Chancellor's Office

#### **Organization**

#### **Ex-Officio Members**

Ruth Ann Terry	California Board of Registered Nursing
Louise Bailey	California Board of Registered Nursing

#### **Project Manager**

Carol Mackay	California Board of Registered Nursing
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